BRUHAT BENGALURU MAHANAGARA PALIKE

Name of work : Drilling of Borewell and installation of pump and motor and laying of Pipe line to providing drinking water to Sidharatha Nagara and Khatha Nagara in Ward-16 Jalahalli

								Estimate Cost Rs.	20.00	Lakhs
Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
1	Geophysical investigation of site for Sinking borewell for supplying drinking water to the habitations either through the hand pump,MWS,PWS by vertical electrical sounding by adpoting venner or Schlumberger's method,including reconnaissance survey of Geological formation. Geophysical investigation of existing ground indecundity its quality & acceptability of the users indicating the location of site,recommended depth of casing pipe required to seal the top in consolidated formation of proper scatting of casing pipe,depth of drilling required to cover full depth of aquifer proposed to be tapped,probable yield and other inflomation required including transporetation technical personal and labour etc.,(PRE SR 2012-13 It.9.4, P-48)									
		Each	2	1			2.00	1882.00	3764.00
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation of rig and supporting vehicals, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour .(excluding cost of casing pipes, collars, cap ect.) (BWSSB SR 2014-15 It.9.1, P-46)									
	a) 00.00 to 50.00mtr	Rmt	2	50.00			100.00	306.00	30600.00
	b) 50.00 to 100.00mtr		2	50.00			100.00	400.00	40000.00
	c) 100.00 to 150.00mtr		2	50.00			100.00	445.00	44500.00
	d) 150.00 to 200.00mtr		2	50.00			100.00	470.00	47000.00
	e) 200.00 to 250.00mtr		2	50.00			100.00	544.00	54400.00
	f) 250.00 to 300.00mtr		2	50.00			100.00	583.00	58300.00
	f) 300.00 to 350.00mtr		2	50.00			100.00	622.00	62200.00
3	Supply of ISI mark 175MM nominal bore plain end Steel casing pipe-grade of steel Fe.410, of wall thickness 5.4 mm thick conforming to IS 4270:2001 and lates amendments electric resistance welded steel tube material and conforming to IS 1387/1993 & manufactured by basic open hearth electric or basic oxygen process in random length of 4 to 7 mtrs. Both ends threaded conforming to IS 554/1985. one end fixed with a socket conforming to IS 4270:2001 and the other end with screwed pipes. All pipes shall be reasonably free from defects. The tubes shall be reasonably straight, should be with ISI marking, weighing 25.10 kg/mtr (inclusive of all taxes and duties)-Prices include Collar-medium duty (PRE SR 2012-13 It.84, P-iii)									
	a) Casing Pipe	Rmt	2	1	50.00		100.00	1325.00	132500.00
4	Supply of 175mm MS Cap. (PRED SR 2010-11 P-ii, I.54)								

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
		Each	2	1			2.00	100.00	200.00
5	Supply of 175mm MS Collar.. (PRED SR 2010-11 P-ii, I.54)								
		Each	2	8			16.00	150.00	2400.00
6	Supply and delivery of submersible pump sets suitable for borewell of 165mm dia with specified duty conditions as detailed below and satisfying performance characteristics fro pump and motor specified in BIS with ISI mark with a minimum efficiency of 42% pump shall confirm to IS 8034/2002 and motor configuring to IS 9283/1995 with ISI certification (12.5 HP) (PWD SR 2018-19, P-XLI, It.36)								
		Nos	2	1			2.00	60697.00	121394.00
7	Supply and drawing 3 core flat PVC Sheathed submersible pump cable manufactured with eloctrolytic grade copper conductor confirming to table 3 class 5 to IS 8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 volts with specified IS 694:1990 and confirming attwached GTP of group A 3C X 6.0 sqmm (PWD Ele SR 2014-15, P-12, It.2.10)								
		Mtr	2	2	340.00		1360.00	151.00	205360.00
8	Erection of Pumpset including alligning and balancing with all necessary erection materials and labour inlcuding supply and erection of one pair of supporting clams , borewell cap , cable clips with bolts , nuts , valve gauges etc., involved in the job. (Necessary G.I. pipe and specials will be supplied by the board at the site free of cost) (CE(M) BWSSB, letter No.BWSSB/CE (M) ACE(M)-II/TA-8/9194/2008-09 dated 21/1/09)(PWD SR 2018-19, P-XLVII, It.4.0)								
		Nos	2	1			2.00	1800.00	3600.00
9	Providing and fixing in position 50mm nominal bore non-return valve vertical type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. (PWD SR 18-19, P-95, it.13.62)								
	Basic rate	1269							
	A.W @ 8%	101.52							
	Total	1370.52							
		Nos	2	1			2.00	1370.52	2741.00
10	Supply and fixing 50mm GI Union. (PWD SR-2016-17, P-XXXIX)								
		Nos	2	2			4.00	223.70	895.00
11	Supply and fixing 50mm GI Elbow. (PWD SR-2016-17, P-XXXIX)								
		Nos	2				2.00	111.80	224.00
12	Supply and fixing 50mm GI Nipple. (PWD SR-2016-17, P-XXXIX)								
		Nos	2	2			4.00	104.30	417.00

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
13	Supply and fixing 50mm heavy duty House Collars. (PWD SR-2016-17, P-XXXIX)								
		Nos	2	50			100.00	103.00	**10300.00**
14	Supply and delivery at site brand New star / Essen/ Lotus/ Sunshine / Adarsh/ GK Controls best indigenous energy make combined energy meter cum control pannel board unit of size 1200 X 600 X 350mm mechanically strong vermin and water proof.The unit shall have two detachable doors suitable for operation on 3ph, 50Hz, 380/440 volts, AC supply with spring loaded latch, locking device with a key ribs should be provided inside the door canopy apron and louvers ventilators shall be provided the combined energy meter cum control panel board unit suitable for operation on 3ph, 50Hz, 380/440 voltsAC supply shall be consists etc, complete the panel board shall be consists etc., complete the panel board shall be fabricated on single unit in the above components panel board for suitable pumpset with Star Delta Starter out door type 10 HP to 15 HP (PWD Ele SR 2014-15)								
		Nos	2	1			2.00	6630.00	**13260.00**
15	Providing and fixing to wall, ceiling and floor galvonised/ mild steel tube 50mm dia nominal bore with fittings(medium grade weight 1.27kg/mtr) B class including cost of materials , labour charges, HOM of equipment and tesing complete as per specifications. Specification No. KBS 13.2.14/13.8(P-92, It.13.15, PWD SR:2018-19)								
	Basic rate	388							
	A.W @ 6%	23.28							
	Total	411.28							
		Rmt	2	200.00			400.00	411.28	**164512.00**
16	Erection of combine Panel borad and meter unit with necessary materials and labour including providing cement concrete foundation bed concrete door type etc complete. (CE(M) BWSSB, letter No.BWSSB/CE(M)/ACE(M)-2/TA-8/9194/2008-09 dated 21/1/09).(PWD Electrical SR 2014-15)								
		Nos	2	1			2.00	425.00	**850.00**
17	Supplying of TPST with rewireable porcelain channels in SM encloser made out of 14 SWG powder coated paint of approved colour 32 amps Group A (PWD Electrical SR 2014-15, P-44, It.6.5.1)								
		Nos	2	1			2.00	1868.00	**3736.00**

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
18	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15mm thick plank with front plank one end provided for holding at other end fixing the same of the valve using through bolts and nuts (PWD Electrical SR 2014-15, P-44, It.6.6.6)								
		Nos	2	1			2.00	302.00	**604.00**
19	Supplying and fixing LED type pannel board indicating lamp with required colous suitable for 220 V AC 50Hz 12/24V DC (PWD Electrical SR 2010-11, P-48, It. 6.36)								
		Nos	2	1			2.00	442.00	**884.00**
20	Wiring for lightnening/ power circuit using one of FRLS PVC Insulated 1100 V grade multistrand copper conductor single core wire in open or concealed system of wiring as per IS 694:1990 and confirming to the attatched GTP of group A. 4Sqmm. (PWD Ele SR 2014-15, P-6, It.2.5.4)								
		Mtr	2	36			72.00	42.10	**3031.00**
21	Fixing a shunt capacity upto 5KVAR capacity with necessary clamps, bolts and nuts on existing woden or metal board including banking of more than one capacitor. (PWD Ele SR 2014-15, P-44, It.6.41)								
		Mtr	2	3			6.00	138.00	**828.00**
22	Supplying and fixing regular MCB distribution boards on wall/ wood board / Flush mounting using required clamps, bolts , nuts with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG M.S enclosure. 12A SP and N (PWD Ele SR 2014-15, P-47, It.6.16.5)								
		Nos	2	1			2.00	1047.00	**2094.00**
23	Supplying and fixing wiring earth electrode for grounding conduits IC Cutouts and other equipments on the meter board using 40mm dia 2.90mm thick G.I. pipe 2.5Mtr long buried in a pit..... The pit should be filled with equal proportion of salt and charcoal 150mm alround the pipe to complete depth. The connections from the pipe to the conduit etc., is to be established though GI wire of size as per ISi specification 7.3.3 of IS 732 using 12mm dia bolts, nuts, washers and checknuts etc., the pipe shall have 16though holes of 122mm dia . (PWD Ele SR 2014-15, P-55, It-7.1)								

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
		Nos	2	1			2.00	2727.00	**5454.00**
24	Supplying fully automatic Star delta starter unit push button type with suitable wires 3 contractors and adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400 / 400 volts phase and wired after fixing to the existing wooden board for motor Group A, II above 15HP up to 25 HP (PWD Ele SR 2014-15, P-44, It-6.2.1)								
		Each	2	1			2.00	6583.00	**13166.00**
25	Supplying and fixing Class A (Medium duty) -GI pipe wall thickness not less than 3.25mm on pole/wall/Drain crossing with necessary clamping arrangements for UG Cable of 1.1KV class 65mm (PWD Ele SR 2014-15, P-62, It-7.12.3)								
		Mtr	2	1	6.00		12.00	585.00	**7020.00**
26	Supplying laying of 1.1KV class L.TU.G Cable having aluminium conductor PVC insulated extruded inner shethed galvanised steel strip (except 2C X 10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554, Part -1:1988 & confirming to the attached GTP of Group A 3.5 core to 25 Sqmm (PWD Ele SR 2014-15, P-55, It-7.4.5)								
		Mtr	2	1	30.00		60.00	165.60	**9936.00**
27	Labour Charges for laying of 1.1 K.V class UG cable 6Sqmm to 16 sqmm (PWD Ele SR 2014-15, P-61, It-7.8.1)								
		Mtr	2	1	30.00		60.00	10.80	**648.00**
28	Digging or trenching of 0.6 m x 0.5 m wide refilling the trench to the required ground level and consolidating in Hard soil etc., complete as per specification and direction of Engineer-in-Charge (PWD Ele SR 2014-15, P-62, It-7.9.2)								
		Mtr	2	1	25.00		50.00	106.00	**5300.00**
29	Supplying and fixing LT cast iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen / insulating compound complete. With terminals, clamps, bolts nuts and washers etc., complete for 16 Sqmm as per specification (PWD Ele SR 2014-15, P-62, It7.13.2)								
		Each	2	1			2.00	280.00	**560.00**
30	Supplying and fixing Porcelain fuse channel with cut out on the existing wooden block & wiring complete 32 amps (PWD Ele SR 2014-15, P-44, It- 6.7)								
		Nos	2	3			6.00	180.00	**1080.00**
31	KPTCL Deopsit charges & Purchase of current meter complete								
		Nos	2	1			2.00	12000.00	**24000.00**

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
33	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(b) / 2.3.5 (PWD SR 2018-19, P-6, It-2.4)								
	Basic rate	449.00	2	9	9				
	A.W @ 6%	26.94	1	9	9				
	Total	**475.94**			316.94				
			1	333	0.45	0.30	44.96		
			1	100	0.45	0.30	13.50	316.94	18598 =N
							58.46	475.94	27821.00
34	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (external work) - 50mm nominal OD pipes (PWD SR 2018-19, P-99, It-13.87.6)								18598 =N
	Basic rate	432.00							
	A.W @ 6%	25.92							
	Total	**457.92**							
	Main line	Mtr	1	333.00			333.00		
							333.00	457.92	**152487.00**
35	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints complete. (external work). - 20mm nominal OD pipes (PWD SR 2018-19, P-98, It-13.85.2)								
	Basic rate	157.00							
	A.W @ 6%	9.42							
	Total	**166.42**							
	Distribution line	Mtr	1	100.00			100.00		
	Tap Connection		1	100.00			100.00		
							200.00	166.42	**33284.00**

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
36	Providing and fixing to wall, ceiling and floor high density polyethylene pipes 6.00 kgf/sq.cm working pressure 63mm outside diameter with special flange, compression type fittings, wall clips, making good the wall, ceiling and floor, including cost of all materials, labour charges, HOM of equipments and testing complete as per specifications. Specification No.KBS 13.2.15.2 / 13.9 (PWD SR 2018-19, P-96, It-13.70.2) 63mm dia								
	25mm outer dia	Mtr	1	100.00			100.00		
							100.00	314.82	31482.00
	Basic rate	297.00							
	A.W @ 6%	17.82							
	Total	**314.82**							
37	KSRB 2-4 : Refilling available around earth pipe lines,cables in layers mot exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. And lift upto 1.5m. Including cost of all labour complete as per specifications.(PWD SR 2018-19, P-7, it-2.11)								
	Qty Vide item No.33	Cum					58.46	128.26	7497.00
	Basic rate	121.00							
	A.W @ 6%	7.26							
	Total	**128.26**							
38	Loading and unloading of stone boulder/stone aggregates/sand/kanker/ moorum. KSRRB M100-1:Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specification MORTH Chapter 1 (PWD SR 2018-19,P-133, it.17.1)								
	Item No:-17.1 Loading	57.00							
	A.W @ 6%	~~3.42~~							
	Conveying for 15km	38.40							
	Total	~~98.82~~ 95.40							
	Balance Qty Vide item No. 33						58.46	95.40	
							58.46	98.82	5777.00 5577
39	KSRB 2-4 : Providing and fixing in position brass gate valve with C.I.wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials,labour and HOM of equipments with all leads complete as per specifications. (P.No.94/ I.No. 13.37 of CSR 2018-19)								
	Basic rate	1739.00							
	A.W @ 6%	104.34							
	Total	**1843.34**							
	For Main Line	Each	1	30.00			30.00	1843.34	55300.00

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
40	Making connection of G.I.distribution branch with G.I.main of 25mm to 40mm. Nominal bore, including cutting and threading the pipes,providing and fixing Tee, nuts,labour for all item of works,testing and HOM of equipments complete as per specifications. (P.No.93/ I.No. 13.20 of SR 2018-19)								
	Basic rate	483.00							
	A.W @ 6%	28.98							
	Total	**511.98**							
		Each	1	30			30.00	511.98	**15359.00**
41	KSRB13-6.2-1 : Providing and fixing in position brass stop cock of approved quality 15mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No.KBS 13.2.2 / 13.3 (Pg No:-93/I.No:-13.26) CSR 2018-19								
		Each	1	50			50.00	149.46	**7473.00**
	Basic rate	141.00							
	A.W @ 6%	8.46							
	Total	**149.46**							
42	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.13, I.No. 4.3 of PWD SR 2018-19)								
	Basic rate	5102.00							
	A.W @ 6%	306.12							
	Total	**5408.12**							
	Main line		1	333.00	0.45	0.15	22.48		
			1	100.00	0.45	0.15	6.75		
							29.23	5408.12	**158066.00**
43	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) M 20 for R.C.C works laid in 15 cms thick layers and well compacted vibrating, curing, for raft foundation column footing , main and secondary beams with all lead and lifts etc., complete (exclusive of cost of steel and fabrication charges.) (P.No.18, I.No. 4.48 of PWD SR 2018-19)								
	Basic rate	5444.00							
	A.W @ 6%	326.64							
	Total	**5770.64**							
	Main line		1	333.00	0.45	0.10	14.99		
			1	100.00	0.45	0.10	4.50		

Sl. No	Description of Item	Unit	No.	L(m)	B(m)	D(m)	Qty.	Rate(Rs)	Amount (Rs)
							19.49	5770.64	112441.00
								Sub Total	1684745.00
								TP 5%	84237
								Sub Total	1768982
								GST 12%	212278
								PMC 1%	17690
								Miscellaneous & Rounding off	1050.057
								Grand Total	2000000.00

CERTIFICATE

1 The work spot have been inspected by me and work is found to be necessary.

2 This estimate is prepared as per CSR of 2018-19

4 The provisions were made in this estimate are adequete and essential

5 This works comes under BBMP Limits

Asst.Engineer
Ward No.16
B.B.M.P

Asst.Executive Engineer
Yeshwanthapura Sub Division
B.B.M.P

Executive Engineer
R. R. Nagara Division
B.B.M.P.

ನಂ.: 350 ದಿನಾಂಕ: 16/3/2020
ರೂ. 20-00 Lakh (Twenty Lakh only)
ಅಂದಾಜು ಪಟ್ಟಿ ಪರೀಕ್ಷಿಸಿದೆ.

ನಂ.: 117 ದಿನಾಂಕ: 16/3/2020
ರೂ. 20-00 Lakh (Twenty Lakh only)
ಗಳ ಅಂದಾಜು ಪಟ್ಟಿ ಪರೀಕ್ಷಿಸಿದೆ.